

CAT6-HDBT DATASHEET

The Laird CAT6-HDBT series of shielded Cat6a Ethernet cable assemblies is built with Belden's 10GX62 cable and terminated with shielded RJ45 plugs. Designed for high bandwidth data, audio, and video transport in professional networks. It addresses the need for stable 10 Gigabit connectivity in electrically noisy or mission-critical environments, where standard unshielded cables can compromise performance and uptime.

10G Ethernet Max Distance

Laird certifies this Cat6a cable to 328 ft (100 m) for 10G Ethernet and 500 ft (152 m) for 1G Ethernet, validated through Bit Error Rate (BER) testing. IEEE 802.3 specifies a maximum of 328 ft (100 m) for Cat6a Ethernet applications; exceeding this threshold risks signal degradation and link failure. Supported signal types-including Ethernet, PoE, and AV-over-IP-each carry distinct distance limitations. Conductor gauge (AWG) affects signal attenuation, power delivery, and usable distance-higher AWG conductors may reduce maximum range. Always consult your application's specifications prior to deployment.

Features:

- Belden 10GX cable for High Density & Reduced Crosstalk
- Small Diameter & Flexibility for Easy Handling
- Electrical Performance Beyond Category 6A
- Backward Compatible with Cat6/5e Components
- High quality RJ45 Connectors



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Specifications:

Belden 10GX62 Riser Rated Cat6a Cable:

- **Conductor AWG:** 23AWG
- **Conductor Stranding:** Solid
- **Conductor Material:** Bare Copper
- **Number of Pairs:** 4
- **Insulation Material:** Polyolefin
- **Bonded-Pair:** Yes
- **Inner Jacket Material:** Polyvinyl Chloride
- **Inner Jacket Nom. Diameter:** 0.26in (6.6mm)
- **Ripcord:** Yes
- **Outer Shield Type:** Tape
- **Outer Shield Material/Coverage %:** Bi-Laminate (Alum+Poly)/100%
- **Drainwire Type/AWG:** 26 AWG (7x34) TC
- **Outer Jacket Separator:** Center Member
- **Outer Jacket Material:** Polyvinyl Chloride
- **Outer Jacket Nom. Diameter:** 0.300in (7.62mm)
- **Overall Cable Nom. Diameter:** 0.300in (7.62mm)
- **Max. Conductor DCR:** 82 Ohm/km (25 Ohm/1000ft)
- **Max. Capacitance Unbalance:** 90 pF/100m
- **Delay Frequency:** 100MHz
- **Max. Delay:** 537.6 ns/100m
- **Max. Delay Skew:** 45 ns/100m
- **Nom. Velocity of Prop.:** 64%
- **Attenuation:**
 - 2.1dB/100m @1MHz
 - 19.1dB/100m @100MHz
 - 45.3dB/100m @500MHz
 - 61.2dB/100m @860MHz
- **Min. Return Loss:**
 - 20 dB @1MHz
 - 25 dB @100MHz
 - 15.2 dB @500MHz
 - 15.2 dB @500MHz
- **UL Voltage Rating:** 300 V (CMR)

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Specifications:

- **Temperature:**
 - **Operating:** -4°F to 167°F (-20°C to +75°C)
 - **Installation:** 32°F to 122°F (0°C to +50°C)
 - **Storage:** -4°F to 167°F (-20°C to +75°C)
- **Min. Bend Radius:**
 - **Stationary:** 1.2in (30mm)
 - **Installation:** 3.0in (76mm)
- **Max. Pull Tension:** 40lbs (18kg)
- **PoE Compliance:** PoE, PoE+, PoE++

Platinum RJ45 Connector:

- Shielded
- 50μ Gold Contacts
- Exceeds 10-Gig performance standards